

Program Component Update Levee Program

The Long-Term Levee Protection Plan will be an appendix to CALFED's Revised Draft EIS/EIR. The draft plan will be available in September 1998 for review.

Program Objective

The CALFED Levee System Integrity Program will develop a Long-Term Levee Protection Plan which has the objective to:

"Reduce the risk to land use and associated economic activities, water supply, infrastructure, and the ecosystem from catastrophic breaching of Delta levees."

The focus of the Levee Program is to provide long-term protection for multiple Delta resources by maintaining and improving the integrity of the Delta levee system. Ecosystem restoration and conveyance improvements will be integrated with levee improvements. Improvements in the reliability of the water quality will be a natural byproduct of the program. The Levee Program will provide protections to:

- Delta communities
- Existing land use
- Water quality
- Ecosystem
- Infrastructure
- Economic activities
- Water supply operations

These resources are at risk from potential failure of the Delta levees and flooding of Delta islands. Water supply operations and water quality are at risk from increased salinity intrusion which could result from the sudden catastrophic inundation of Delta islands.

To protect these resources and provide long term levee stability the program is focused on reconstructing and maintaining Delta levees, developing subsidence control measures and emergency management procedures, and quantifying seismic risk to Delta levees. The Levee Program will build upon a foundation of existing state, federal, and local agency programs. Its focus is to supplement and improve these existing programs where deficiencies are identified.

Background/Conflicts

Currently levee reconstruction and maintenance is often in conflict with terrestrial and aquatic habitat resources on or around levees. Controlling levee and channel vegetation is routinely delayed or precluded due to impacts to endangered species. CALFED could separate these resources where possible to reduce conflicts. Habitat could be relocated outside the levee's structural cross-section to enable both to function independently.

Over the past decade and particularly since 1992, with the listing of delta smelt and winter run Chinook Salmon, it has become increasingly difficult to dredge channels and to conduct levee work involving dredging materials from adjacent channels. As a result, dredging in the Delta has nearly ceased and dredges, barges, tugs and experienced people have been leaving the Delta. Without a significant local dredging capability, effective response to levee emergencies is severely limited. The Levee Program includes various actions to address this issue such as a comprehensive research and monitoring program and a permit coordination program to improve the efficiency of the permit process.

Actions to control subsidence can be implemented in conjunction with ecosystem restoration activities and provide an opportunity to continue investigating methods for reversing subsidence. Creating habitat corridors can be implemented in conjunction with levee setbacks for Delta channel conveyance improvements. A comprehensive emergency management plan will be implemented that coordinates emergency response measures while protecting Delta ecosystem resources to the greatest extent possible.

Program Goals and Description

Actions under the Levee System Integrity Program will be closely integrated with the Ecosystem Restoration Program Plan and Delta conveyance actions to simultaneously increase system integrity, increase ecosystem quality, and protect water quality and water supply reliability.

The Program includes five Elements. The goal and key tasks for each Element is as follows:

1. Delta Levee Base Level Protection Plan

The goal of this Plan is to build upon existing programs to improve and maintain all Delta levees. The Levees and Channels Technical Team recommends that the Corps of Engineers PL 84-99 standard be adopted.

Tasks include:

- Develop a stable funding source to rehabilitate levees to PL 84-99 criteria
- Develop a cost sharing structure between federal, state, and local interests
- Develop a long-term strategy to comply with environmental regulations
- Integrate levee rehabilitation with ecosystem restoration and conveyance improvements

2. Delta Levee Special Improvement Projects

The goal of this element is to provide additional flood protections in addition to the Delta Levee Base Level Protection Plan for key Delta islands that provide statewide benefits to the ecosystem, water supply, water quality, economics, and infrastructure.

Tasks include:

- Develop a stable funding source to rehabilitate levees on a priority basis
- Develop a cost sharing structure between federal, state, and local interests
- Develop a long-term strategy to comply with environmental regulations
- Integrate levee rehabilitation with ecosystem restoration and conveyance improvements

3. Delta Island Subsidence Control Plan

The goal of this plan is to reduce the risk of Delta levee failures due to subsidence.

Tasks include:

- Fund a grant program to develop Best Management Practices to control subsidence around levees
- Fund subsidence projects after BMP's are developed
- Monitor subsidence control measures and inter-island subsidence rates
- Use adaptive management approach to take corrective action based on monitoring data

4. **Delta Levee Emergency Management Plan**

The goal of this plan is to enhance existing emergency management response capabilities to protect critical Delta resources in the event of a disaster. The Plan must be consistent with the Governor's May 1997 Flood Emergency Action Team (FEAT) Report.

Tasks include:

- Establish a stable funding source for emergency response
- Improve command and control protocol
- Preposition flood fighting supplies
- Establish standardized contracts for flood fighting and recovery operations

5. **Delta Levee Seismic Risk Assessment**

The goal of the assessment is to identify the risk to Delta resources from catastrophic seismic events and develop recommendations to improve the seismic stability of Delta levees.

Tasks include:

- Convene an expert panel to quantify seismicity of the Delta region, the fragility of the existing levees, and develop recommendations to improve the seismic stability of Delta levees – Report is due July 1998

Issues and Concerns

The following issues have identified from Levees and Channels Technical Team discussions.

• Maintenance of the Common Pool:

There is concern that support for the Levee Program would wane if a peripheral canal is built. This is an assurance issue that should be addressed if alternative three is chosen.

• Scope of Subsidence Control:

The Levee Program plans to implement subsidence control measures for levee integrity (The distance at which subsidence affects levee integrity is usually no more than about 500 feet.) The ERP plans to implement subsidence control measures where habitat restoration opportunities exist.

Some stakeholders feel that subsidence control of all other areas needs to be addressed.

The Subsidence Subteam of the Levees and Channels Technical Team is currently working on this issue. At this point the Subteam feels that through adaptive management inter-island subsidence would be monitored and corrective action could be taken.

• Suisun Marsh Levees:

Some stakeholders feel that the Suisun Marsh levees should be included in the Levee Program for reconstruction and/or Emergency Response. The Delta interests feel strongly that they should not because it would limit Delta Levee Program funding. The Levees and Channels Technical Team is working to quantify the costs. A decision is optional right now.

Stakeholder involvement

The following stakeholders/agencies attend the Levees and Channels Technical Team. CALFED staff is preparing a mailer to be sent to other stakeholders to inform them of the Levees and Channels Technical Team.

- North Delta Water Agency
- Central Delta Water Agency
- South Delta Water Agency
- Reclamation Districts
- Central Valley Flood Control Association
- Natural Heritage Institute
- Metropolitan Water District of Southern California
- San Luis and Delta Mendota Water Agencies
- USGS
- Corps of Engineers
- DFG
- DWR
- Delta Protection Commission